

AIR QUALITY IMPACT ASSESSMENT

(The bulk of this information was taken directly from Section 424 of the WSDOT Environmental Procedures Manual.)

Introduction

Federal, state, and local regulations require that all projects be reviewed for potential impacts to air quality. All transportation projects requesting federal funding and all regional significant projects must be analyzed for regional air quality emissions. This regional analysis is usually conducted by the local metropolitan planning organization (MPO) or regional transportation planning organization (RTPO) when assembling the regional transportation improvement program (TIP). Additional regional analysis would only be needed for very large, regionally significant projects.

Based on monitoring information collected over a period of years, the state (WA State Dept. of Ecology) and federal (Environmental Protection Agency) agencies designate regions as “attainment” or “non-attainment” areas for particular air pollutants called “criteria” pollutants. Attainment status is therefore a measure of whether or not air quality in an area complies with the relevant National Ambient Air Quality Standards (NAAQS) for six criteria air pollutants: carbon monoxide, sulfur dioxide, particulate matter, ground level ozone, lead, and nitrogen dioxide. Once a non-attainment area achieves compliance with the NAAQS, the area is considered an air quality “maintenance” area until the standard has been maintained for 10 years.

Under federal and state clean air rules, there are special requirements in non-attainment and maintenance areas to ensure that proposed transportation projects do not cause or contribute to existing air quality problems. These so-called “conformity rules” require analysis to demonstrate compliance with existing air quality control plans and programs. Guidelines referenced in this section will assist in determining air quality analysis requirements.

National Environmental Policy Act (NEPA)

The National Environmental Policy Act (NEPA), 42 USC 4231, requires that all actions sponsored, funded, permitted, or approved by federal agencies undergo planning to ensure that environmental considerations such as impacts on air quality are given due weight in project decision-making.

Guidance

An air quality conformity determination is required for all non-exempt projects within or affecting a non-attainment or maintenance area for criteria pollutants, as established in the NAAQS. When an Environmental Impact Statement (EIS) is required, an air quality study is required regardless of the project location.

Exempt Projects

Exempt projects listed in federal and state regulations (40 CFR 93.126 and WAC 173-420-110) improve safety, mass transit, or air quality, or preserve or maintain existing

transportation facilities. These projects are considered to have a neutral impact on air quality.

See 40 CFR 93.126 for the list of projects exempt from project level conformity requirements. A copy of the exempt list is also included on Appendix B of this document.

See 40 CFR 93.127 for the list of projects exempt from regional conformity requirements. A copy of the exempt list is also included on Appendix C of this document.

(Note: Projects are not necessarily considered exempt from both lists. Installation of a new traffic signal, for example, is exempt from Regional analysis but not from local hot-spot analysis.)

Conformity

The NEPA document should include a statement of the attainment status of the area in which the project is located. If the project is in an area that is in attainment for all pollutants of concern (ozone, CO, PM₁₀ and NO₂), the NEPA document should say that the area is in attainment for transportation-related pollutants and indicate that conformity does not apply.

If the area is in non-attainment or maintenance for any of the four pollutants, the document should state which pollutants cause the area to be classified as such. Then it should address conformity, making a statement to the effect that the project is included in the State Implementation Plan and TIP found in accordance with the EPA final conformity regulations dated, November 24, 1993. List specific dates of the pertinent conformity determinations by the MPO and FHWA/FTA. (States are required to develop a State Implementation Plan that explains how it will comply with the Clean Air Act. A SIP is a collection of the regulations a state will use to clean up polluted areas. EPA must approve the SIP, and if a SIP is not acceptable, EPA can take over, enforcing the CAA in that state.)

Air Quality Analysis

The NEPA document should include and discuss the results of quantitative local CO analysis (hot-spot) or explain why a quantitative analysis was not needed to assess the air quality impacts. The following steps should be taken:

Determine if the project will not require quantitative (hot-spot) analysis or is exempt from a conformity determination (no regional or hot-spot analysis is required).

Determine if the project is one of the types that do not impact regional emissions (no regional analysis required; does not have to come from conforming SIP and TIP). If the project will not require quantitative analysis, note this and make reference to 40 CFR 93.123. If the project is exempt from either regional or local analysis, note this and make reference to the specific exemption from 40 CFR 93.126 or 40 CFR 93.127, as applicable.

The document should discuss key assumptions made in performing the analysis. The assumptions must satisfy the following requirements:

- Planning assumptions must be derived from the estimates of current and future populations, employment, travel and congestion most recently developed or approved by the MPO.
- Hot-spot analysis assumptions must be consistent with those in the regional emissions analysis for inputs that are required by both analyses.

A hot-spot analysis is an estimate of the likely future localized CO and PM₁₀ pollutant concentrations and a comparison of those concentrations to the NAAQS. Hot-spot analysis assesses impacts on a scale smaller than the entire non-attainment or maintenance area (for example, congested roadway intersections and highways or transit terminals), and uses an air quality dispersion model to determine the effects of emissions on air quality.

Air quality conformity discipline reports should be submitted to the Regional Local Programs office for transmittal to the Local Programs Environmental Engineer. The Local Programs Environmental Engineer will coordinate with the WSDOT Air Quality resources to complete the review on the document. Once approved, the document should be included in an agency's NEPA documentation submittal.

APPENDIX A

Washington State Department of Ecology's Air Quality Maps of Non-attainment and Maintenance Areas

The U.S. Environmental Protection Agency (EPA) has designated areas that have experienced persistent air quality problems as non-attainment areas. The federal Clean Air Act requires additional air pollution controls in these areas. Each non-attainment area is declared for a specific pollutant; however, non-attainment areas for different pollutants may overlap each other or share common boundaries.

EPA has designated 13 areas in Washington State as non-attainment. After air monitoring shows that a non-attainment area is meeting health-based air quality standards, EPA can re-designate the area as attainment. To be re-designated, an area must both meet air quality standards, and have a 10-year plan for continuing to meet and maintain air quality standards and other requirements of the Clean Air Act. Areas that are re-designated to attainment are called maintenance areas.

Here is the current status of the 13 areas in Washington State designated as non-attainment areas:

Ozone: Central Puget Sound (King, Pierce and Snohomish Counties) and Vancouver (Clark County) are maintenance areas.

Particulate Matter (PM₁₀, PM_{2.5}): Thurston County, Tacoma Tideflats, Kent Valley, and Seattle Duwamish are maintenance areas.

Spokane, Yakima, and Wallula are non-attainment areas.

Carbon Monoxide: Central Puget Sound (King, Pierce and Snohomish Counties) and Vancouver (Clark County) are maintenance areas.

Spokane and Yakima are non-attainment areas.

The state has requested that EPA re-designate Yakima to a maintenance area.

Check the link below to determine whether or not your project is located in a non-attainment or maintenance area.

http://www.ecy.wa.gov/programs/air/other/namaps/Web_Map_Intro.htm

You can also check the Puget Sound Regional Council link to Designated Maintenance Areas for Criteria Pollutants – Carbon Monoxide, Ozone, and Particulate Matter

<http://www.psrc.org/projects/tip/tipinfo2airqual.pdf>

APPENDIX B

40 CFR 93.126 – List of Projects Exempt from Local Air Quality Analysis

Sec. 93.126 Exempt projects.

Notwithstanding the other requirements of this subpart, highway and transit projects of the types listed in Table 2 of this section are exempt from the requirement to determine conformity. Such projects may proceed toward implementation even in the absence of a conforming transportation plan and TIP. A particular action of the type listed in Table 2 of this section is not exempt if the MPO in consultation with other agencies (see Sec. 93.105(c)(1)(iii)), the EPA, and the FHWA (in the case of a highway project) or the FTA (in the case of a transit project) concur that it has potentially adverse emissions impacts for any reason. States and MPOs must ensure that exempt projects do not interfere with TCM implementation. Table 2 follows:

Table 2--Exempt Projects

Safety

Railroad/highway crossing.
Hazard elimination program.
Safer non-Federal-aid system roads.
Shoulder improvements.
Increasing sight distance.
Safety improvement program.
Traffic control devices and operating assistance other than signalization projects.
Railroad/highway crossing warning devices.
Guardrails, median barriers, crash cushions.
Pavement resurfacing and/or rehabilitation.
Pavement marking demonstration.
Emergency relief (23 U.S.C. 125).
Fencing.
Skid treatments.
Safety roadside rest areas.
Adding medians.
Truck climbing lanes outside the urbanized area.
Lighting improvements.
Widening narrow pavements or reconstructing bridges (no additional travel lanes).
Emergency truck pullovers.

Mass Transit

Operating assistance to transit agencies.
Purchase of support vehicles.
Rehabilitation of transit vehicles \1\
Purchase of office, shop, and operating equipment for existing facilities.
Purchase of operating equipment for vehicles (e.g., radios, fareboxes, lifts, etc.).
Construction or renovation of power, signal, and communications systems.
Construction of small passenger shelters and information kiosks.

Reconstruction or renovation of transit buildings and structures (e.g., rail or bus buildings, storage and maintenance facilities, stations, terminals, and ancillary structures).
Rehabilitation or reconstruction of track structures, track, and trackbed in existing rights-of-way.
Purchase of new buses and rail cars to replace existing vehicles or for minor expansions of the fleet \1\
Construction of new bus or rail storage/maintenance facilities categorically excluded in 23 CFR part 771.

Air Quality

Continuation of ride-sharing and van-pooling promotion activities at current levels.
Bicycle and pedestrian facilities.

Other

Specific activities which do not involve or lead directly to construction, such as:

- Planning and technical studies.
- Grants for training and research programs.
- Planning activities conducted pursuant to titles 23 and 49 U.S.C.
- Federal-aid systems revisions.

Engineering to assess social, economic, and environmental effects of the proposed action or alternatives to that action.

Noise attenuation.

Emergency or hardship advance land acquisitions (23 CFR 712.204(d)).

Acquisition of scenic easements.

Plantings, landscaping, etc.

Sign removal.

Directional and informational signs.

Transportation enhancement activities (except rehabilitation and operation of historic transportation buildings, structures, or facilities).

Repair of damage caused by natural disasters, civil unrest, or terrorist acts, except projects involving substantial functional, locational or capacity changes.

Note: \1\In PM<INF>10</INF> nonattainment or maintenance areas, such projects are exempt only if they are in compliance with control measures in the applicable implementation plan.

APPENDIX C

40 CFR 93.127 - List of Projects Exempt from Regional Air Quality Analysis

Sec. 93.127 Projects exempt from regional emissions analyses.

Notwithstanding the other requirements of this subpart, highway and transit projects of the types listed in Table 3 of this section are exempt from regional emissions analysis requirements. The local effects of these projects with respect to CO or PM₁₀ concentrations must be considered to determine if a hot-spot analysis is required prior to making a project-level conformity determination. These projects may then proceed to the project development process even in the absence of a conforming transportation plan and TIP. A particular action of the type listed in Table 3 of this section is not exempt from regional emissions analysis if the MPO in consultation with other agencies (see Sec. 93.105(c)(1)(iii)), the EPA, and the FHWA (in the case of a highway project) or the FTA (in the case of a transit project) concur that it has potential regional impacts for any reason. Table 3 follows:

Table 3--Projects Exempt From Regional Emissions Analyses

Intersection channelization projects.
Intersection signalization projects at individual intersections.
Interchange reconfiguration projects.
Changes in vertical and horizontal alignment.
Truck size and weight inspection stations.
Bus terminals and transfer points.

APPENDIX D

Air Quality Conformity Guidance Project Level Preliminary Screening

